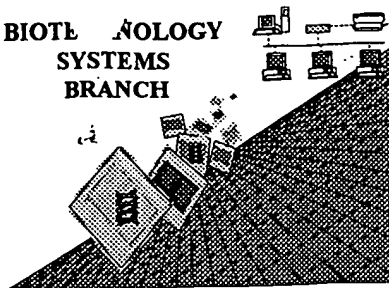


RAW SEQUENCE LISTING **ERROR REPORT**

BIOTECHNOLOGY
SYSTEMS
BRANCH



SK

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/830,433
Source: Pt 1/09
Date Processed by STIC: 9/13/2001

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

PCT09

RAW SEQUENCE LISTING

DATE: 09/13/2001

PATENT APPLICATION: US/09/830,433

TIME: 17:15:58

Input Set : A:\09-830,433-Seq.Listing.txt

Output Set: N:\CRF3\09132001\I830433.raw

Does Not Comply
Corrected Diskette Needed

3 <110> APPLICANT: AUJAME et al.
 6 <120> TITLE OF INVENTION: Nucleic acids and polypeptides specific for pathogenic
 7 strains of the Neisseria genius
 9 <130> FILE REFERENCE: P07180US00/BAS
 11 <140> CURRENT APPLICATION NUMBER: 09/830,433
 12 <141> CURRENT FILING DATE: 2001-08-16
 14 <150> PRIOR APPLICATION NUMBER: FR 98 13 693
 15 <151> PRIOR FILING DATE: 1998-10-30
 17 <160> NUMBER OF SEQ ID NOS: 129
 19 <170> SOFTWARE: PatentIn Ver. 2.1

ERRORED SEQUENCES

875 <210> SEQ ID NO: 8
 876 <211> LENGTH: 1067
 877 <212> TYPE: PRT
 878 <213> ORGANISM: Neisseria meningitidis
 880 <400> SEQUENCE: 8
 881 Met Arg Thr Thr Pro Thr Phe Pro Thr Lys Thr Phe Lys Pro Ala Ala
 882 1 5 10 15
 884 Met Ala Leu Ala Val Ala Thr Thr Leu Ser Ala Cys Leu Gly Gly Gly
 885 20 25 30
 887 Gly Gly Thr Ser Ala Pro Asp Phe Asn Ala Gly Gly Thr Gly Ile Gly
 888 35 40 45
 890 Ser Asn Ser Arg Ala Thr Thr Ala Lys Ser Ala Ala Val Ser Tyr Ala
 891 50 55 60
 893 Gly Ile Lys Asn Glu Met Cys Lys Asp Arg Ser Met Leu Cys Ala Gly
 894 65 70 75 80
 896 Arg Asp Asp Val Ala Val Thr Asp Arg Asp Ala Lys Ile Asn Ala Pro
 897 85 90 95
 899 Pro Pro Asn Leu His Thr Gly Asp Phe Thr Asn Pro Asn Asp Ala Tyr
 900 100 105 110
 902 Lys Asn Leu Ile Asn Leu Lys Pro Ala Ile Glu Ala Gly Tyr Thr Gly
 903 115 120 125
 905 Arg Gly Val Glu Val Gly Ile Val Asp Thr Gly Glu Ser Val Gly Ser
 906 130 135 140
 908 Ile Ser Phe Pro Glu Leu Tyr Gly Arg Lys Glu His Gly Tyr Asn Glu
 909 145 150 155 160
 911 Asn Tyr Lys Asn Tyr Thr Ala Tyr Met Arg Lys Glu Ala Pro Glu Asp
 912 165 170 175
 914 Gly Gly Gly Lys Asp Ile Lys Ala Ser Phe Asp Asp Glu Ala Val Ile
 915 180 185 190
 917 Glu Thr Glu Ala Lys Pro Thr Asp Ile Arg His Val Lys Glu Ile Gly
 918 195 200 205
 920 His Ile Asp Val Val Ser His Ile Ile Gly Gly Arg Ser Val Asp Gly
 921 210 215 220

RAW SEQUENCE LISTING

DATE: 09/13/2001

PATENT APPLICATION: US/09/830,433

TIME: 17:15:58

Input Set : A:\09-830,433-Seq.Listing.txt

Output Set: N:\CRF3\09132001\I830433.raw

```

923 Arg Pro Ala Gly Gly Ile Ala Pro Asp Ala Thr Leu His Ile Met Asn
924 225                230                235                240
926 Thr His Asp Gly Thr Lys Asn Glu Ile Met Ser Ala Ala Ile Arg Asn
927                245                250                255
929 Ala Trp Val Lys Leu Gly Glu Arg Gly Val Arg Ile Val Asn Asn Ser
930                260                265                270
932 Phe Gly Thr Thr Ser Arg Ala Gly Thr Ala Asp His Phe Gln Ile Ala
933                275                280                285
935 Asn Ser Glu Glu Gln Tyr Arg Gln Ala Leu Leu Ala Tyr Ser Gly Gly
936                290                295                300
938 Asp Lys Thr Asp Glu Gly Ile Arg Leu Met Gln Gln Ser Asp Tyr Gly
939 305                310                315                320
941 Asn Leu Ser Tyr His Ile Arg Asn Lys Asn Met Leu Phe Ile Phe Ser
942                325                330                335
944 Ala Ser Asn Asp Ala Gln Ala Gln Pro Asn Thr Leu Thr Leu Leu Pro
945                340                345                350
947 Phe Tyr Glu Lys Asp Ala Gln Lys Gly Ile Ile Thr Val Ala Gly Val
948                355                360                365
950 Asp Arg Ser Gly Glu Lys Phe Asn Gly Ser Asn His Cys Gly Ile Thr
951 370                375                380
953 Ala Met Trp Cys Leu Ser Ala Pro Tyr Glu Ala Ser Val Arg Phe Thr
954 385                390                395                400
956 Arg Thr Asn Pro Ile Gln Ile Ala Gly Thr Ser Phe Ser Ala Pro Ile
957                405                410                415
959 Val Thr Gly Thr Ala Ala Leu Leu Leu Gln Lys Tyr Pro Trp Met Ser
960                420                425                430
962 Asn Asp Asn Leu Arg Thr Thr Leu Leu Thr Thr Ala Gln Asp Ile Gly
963                435                440                445
965 Ala Val Gly Val Asp Ser Lys Phe Gly Trp Gly Leu Leu Asp Ala Gly
966                450                455                460
968 Lys Ala Met Asn Gly Pro Ala Ser Phe Pro Phe Gly Asp Phe Thr Ala
969 465                470                475                480
971 Asp Thr Lys Gly Thr Ser Asp Ile Ala Tyr Ser Phe Arg Asn Asp Ile
972                485                490                495
974 Ser Gly Thr Gly Gly Leu Ile Lys Lys Gly Gly Ser Gln Leu Gln Leu
975                500                505                510
977 His Gly Asn Asn Thr Tyr Thr Gly Lys Thr Ile Ile Glu Gly Gly Ser
978                515                520                525
980 Leu Val Leu Tyr Gly Asn Asn Lys Ser Asp Met Arg Val Glu Thr Lys
981                530                535                540
983 Gly Ala Leu Ile Tyr Asn Gly Ala Ala Ser Gly Gly Ser Leu Asn Ser
984 545                550                555                560
986 Asp Gly Ile Val Tyr Leu Ala Asp Thr Asp Arg Ser Gly Ala Asn Glu
987                565                570                575
989 Thr Val His Ile Lys Gly Asp Leu Gln Leu Gly Gly Glu Gly Thr Leu
990                580                585                590
992 Tyr Thr Arg Leu Gly Lys Leu Leu Lys Val Asp Gly Thr Ala Met Thr
993                595                600                605
995 Gly Gly Lys Leu Tyr Met Ser Ala Arg Gly Lys Gly Ala Gly Tyr Leu

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/830,433

DATE: 09/13/2001

TIME: 17:15:58

Input Set : A:\09-830,433-Seq.Listing.txt

Output Set: N:\CRF3\09132001\I830433.raw

```

996      610      615      620
998 Asn Arg Thr Gly Gln Arg Val Pro Phe Leu Ser Ala Ala Lys Ile Gly
999 625      630      635      640
1001 Arg Asp Tyr Ser Phe Phe Thr Asn Ile Glu Thr Asp Gly Gly Leu Leu
1002      645      650      655
1004 Ala Ser Leu Asp Ser Val Glu Lys Thr Ala Gly Ser Glu Gly Asp Thr
1005      660      665      670
1007 Leu Ser Tyr Tyr Val Arg Arg Gly Asn Ala Ala Arg Thr Ala Ser Ala
1008      675      680      685
1010 Ala Ala His Ser Ala Pro Ala Gly Leu Lys His Ala Val Glu Gln Gly
1011      690      695      700
1013 Gly Ser Asn Leu Glu Asn Leu Met Val Glu Leu Asp Ala Ser Glu Ser
1014 705      710      715      720
1016 Ser Ala Thr Pro Glu Thr Val Glu Thr Ala Ala Ala Asp Arg Thr Asp
1017      725      730      735
1019 Met Pro Gly Ile Arg Pro Tyr Gly Ala Thr Phe Arg Ala Ala Ala Ala
1020      740      745      750
1022 Val Gln His Ala Asn Ala Ala Asp Gly Val Arg Ile Phe Asn Ser Leu
1023      755      760      765
1025 Ala Ala Thr Val Tyr Ala Asp Ser Thr Ala Ala His Ala Asp Met Gln
1026      770      775      780
1028 Gly Arg Arg Leu Lys Ala Val Ser Asp Gly Leu Asp His Asn Ala Thr
1029 785      790      795      800
1031 Gly Leu Arg Val Ile Ala Gln Thr Gln Gln Asp Gly Gly Thr Trp Glu
1032      805      810      815
1034 Gln Gly Gly Val Glu Gly Lys Met Arg Gly Ser Thr Gln Thr Val Gly
1035      820      825      830
1037 Ile Ala Ala Lys Thr Gly Glu Asn Thr Thr Ala Ala Ala Thr Leu Gly
1038      835      840      845
1040 Met Gly His Ser Thr Trp Ser Glu Asn Ser Ala Asn Ala Lys Thr Asp
1041      850      855      860
1043 Ser Ile Ser Leu Phe Ala Gly Ile Arg His Asp Ala Gly Asp Ile Gly
1044 865      870      875      880
1046 Tyr Leu Lys Gly Leu Phe Ser Tyr Gly Arg Tyr Lys Asn Ser Ile Ser
1047      885      890      895
1049 Arg Ser Thr Gly Ala Asp Glu His Ala Glu Gly Ser Val Asn Gly Thr
1050      900      905      910
1052 Leu Met Gln Leu Gly Ala Leu Gly Gly Val Asn Val Pro Phe Ala Ala
1053      915      920      925
1055 Thr Gly Asp Leu Thr Val Glu Gly Gly Leu Arg Tyr Asp Leu Leu Lys
1056      930      935      940
1058 Gln Asp Ala Phe Ala Glu Lys Gly Ser Ala Leu Gly Trp Ser Gly Asn
1059 945      950      955      960
1061 Ser Leu Thr Glu Gly Thr Leu Val Gly Leu Ala Gly Leu Lys Leu Ser
1062      965      970      975
1064 Gln Pro Leu Ser Asp Lys Ala Val Leu Phe Ala Thr Ala Gly Val Glu
1065      980      985      990
1067 Arg Asp Leu Asn Gly Arg Asp Tyr Thr Val Thr Gly Gly Phe Thr Gly
1068      995      1000      1005

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/830,433

DATE: 09/13/2001

TIME: 17:15:58

Input Set : A:\09-830,433-Seq.Listing.txt

Output Set: N:\CRF3\09132001\I830433.raw

```

1070 Ala Thr Ala Ala Thr Gly Lys Thr Gly Ala Arg Asn Met Pro His Thr
1071      1010                      1015                      1020
1073 Arg Leu Val Ala Gly Leu Gly Ala Asp Val Glu Phe Gly Asn Gly Trp
E--> 1074 025 1025          1030          1035          1040
1076 Asn Gly Leu Ala Arg Tyr Ser Tyr Ala Gly Ser Lys Gln Tyr Gly Asn
1077      1045                      1050                      1055
1079 His Ser Gly Arg Val Gly Val Gly Tyr Arg Phe
1080      1060                      1065

```

When
numbering
first amino
acid on a line,
begin number
directly under
first letter of
amino acid

E.S. Arg
1025

<210> 115

<211> 32

<212> DNA

<213> Artificial Sequence

*see item 11 on Eva Summary
sheet*

<400> 115

cgggatccat cgttcttcaa tctccacaaa cg

32

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/830,433

DATE: 09/13/2001

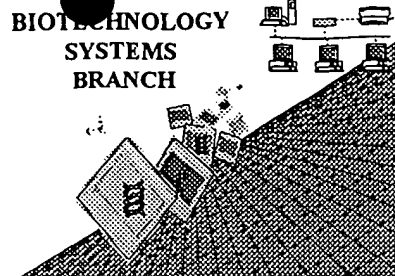
TIME: 17:16:00

Input Set : A:\09-830,433-Seq.Listing.txt

Output Set: N:\CRF3\09132001\I830433.raw

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:1074 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:8
L:7951 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:7951 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:

RAW SEQUENCE LISTING ERROR REPORT



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/830,433
Source: PCT/09
Date Processed by STIC: 9/13/2001

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

S

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/830,433

DATE: 09/13/2001

TIME: 17:16:00

Input Set : A:\09-830,433-Seq.Listing.txt

Output Set: N:\CRF3\09132001\I830433.raw

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:1074 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:8
L:7951 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:7951 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:

PCT09

RAW SEQUENCE LISTING

DATE: 09/13/2001

PATENT APPLICATION: US/09/830,433

TIME: 17:15:58

Input Set : A:\09-830,433-Seq.Listing.txt

Output Set: N:\CRF3\09132001\I830433.raw

Does Not Comply
Corrected Diskette Needed

3 <110> APPLICANT: AUJAME et al.
 6 <120> TITLE OF INVENTION: Nucleic acids and polypeptides specific for pathogenic
 7 strains of the Neisseria genius
 9 <130> FILE REFERENCE: P07180US00/BAS
 11 <140> CURRENT APPLICATION NUMBER: 09/830,433
 12 <141> CURRENT FILING DATE: 2001-08-16
 14 <150> PRIOR APPLICATION NUMBER: FR 98 13 693
 15 <151> PRIOR FILING DATE: 1998-10-30
 17 <160> NUMBER OF SEQ ID NOS: 129
 19 <170> SOFTWARE: PatentIn Ver. 2.1

ERRORED SEQUENCES

875 <210> SEQ ID NO: 8
 876 <211> LENGTH: 1067
 877 <212> TYPE: PRT
 878 <213> ORGANISM: Neisseria meningitidis
 880 <400> SEQUENCE: 8
 881 Met Arg Thr Thr Pro Thr Phe Pro Thr Lys Thr Phe Lys Pro Ala Ala
 882 1 5 10 15
 884 Met Ala Leu Ala Val Ala Thr Thr Leu Ser Ala Cys Leu Gly Gly Gly
 885 20 25 30
 887 Gly Gly Thr Ser Ala Pro Asp Phe Asn Ala Gly Gly Thr Gly Ile Gly
 888 35 40 45
 890 Ser Asn Ser Arg Ala Thr Thr Ala Lys Ser Ala Ala Val Ser Tyr Ala
 891 50 55 60
 893 Gly Ile Lys Asn Glu Met Cys Lys Asp Arg Ser Met Leu Cys Ala Gly
 894 65 70 75 80
 896 Arg Asp Asp Val Ala Val Thr Asp Arg Asp Ala Lys Ile Asn Ala Pro
 897 85 90 95
 899 Pro Pro Asn Leu His Thr Gly Asp Phe Thr Asn Pro Asn Asp Ala Tyr
 900 100 105 110
 902 Lys Asn Leu Ile Asn Leu Lys Pro Ala Ile Glu Ala Gly Tyr Thr Gly
 903 115 120 125
 905 Arg Gly Val Glu Val Gly Ile Val Asp Thr Gly Glu Ser Val Gly Ser
 906 130 135 140
 908 Ile Ser Phe Pro Glu Leu Tyr Gly Arg Lys Glu His Gly Tyr Asn Glu
 909 145 150 155 160
 911 Asn Tyr Lys Asn Tyr Thr Ala Tyr Met Arg Lys Glu Ala Pro Glu Asp
 912 165 170 175
 914 Gly Gly Gly Lys Asp Ile Lys Ala Ser Phe Asp Asp Glu Ala Val Ile
 915 180 185 190
 917 Glu Thr Glu Ala Lys Pro Thr Asp Ile Arg His Val Lys Glu Ile Gly
 918 195 200 205
 920 His Ile Asp Val Val Ser His Ile Ile Gly Gly Arg Ser Val Asp Gly
 921 210 215 220

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/830,433

DATE: 09/13/2001

TIME: 17:15:58

Input Set : A:\09-830,433-Seq.Listing.txt

Output Set: N:\CRF3\09132001\I830433.raw

```

923 Arg Pro Ala Gly Gly Ile Ala Pro Asp Ala Thr Leu His Ile Met Asn
924 225                               230                               235                               240
926 Thr His Asp Gly Thr Lys Asn Glu Ile Met Ser Ala Ala Ile Arg Asn
927                               245                               250                               255
929 Ala Trp Val Lys Leu Gly Glu Arg Gly Val Arg Ile Val Asn Asn Ser
930                               260                               265                               270
932 Phe Gly Thr Thr Ser Arg Ala Gly Thr Ala Asp His Phe Gln Ile Ala
933                               275                               280                               285
935 Asn Ser Glu Glu Gln Tyr Arg Gln Ala Leu Leu Ala Tyr Ser Gly Gly
936 290                               295                               300
938 Asp Lys Thr Asp Glu Gly Ile Arg Leu Met Gln Gln Ser Asp Tyr Gly
939 305                               310                               315                               320
941 Asn Leu Ser Tyr His Ile Arg Asn Lys Asn Met Leu Phe Ile Phe Ser
942                               325                               330                               335
944 Ala Ser Asn Asp Ala Gln Ala Gln Pro Asn Thr Leu Thr Leu Leu Pro
945                               340                               345                               350
947 Phe Tyr Glu Lys Asp Ala Gln Lys Gly Ile Ile Thr Val Ala Gly Val
948                               355                               360                               365
950 Asp Arg Ser Gly Glu Lys Phe Asn Gly Ser Asn His Cys Gly Ile Thr
951 370                               375                               380
953 Ala Met Trp Cys Leu Ser Ala Pro Tyr Glu Ala Ser Val Arg Phe Thr
954 385                               390                               395                               400
956 Arg Thr Asn Pro Ile Gln Ile Ala Gly Thr Ser Phe Ser Ala Pro Ile
957                               405                               410                               415
959 Val Thr Gly Thr Ala Ala Leu Leu Leu Gln Lys Tyr Pro Trp Met Ser
960                               420                               425                               430
962 Asn Asp Asn Leu Arg Thr Thr Leu Leu Thr Thr Ala Gln Asp Ile Gly
963                               435                               440                               445
965 Ala Val Gly Val Asp Ser Lys Phe Gly Trp Gly Leu Leu Asp Ala Gly
966 450                               455                               460
968 Lys Ala Met Asn Gly Pro Ala Ser Phe Pro Phe Gly Asp Phe Thr Ala
969 465                               470                               475                               480
971 Asp Thr Lys Gly Thr Ser Asp Ile Ala Tyr Ser Phe Arg Asn Asp Ile
972                               485                               490                               495
974 Ser Gly Thr Gly Leu Ile Lys Lys Gly Gly Ser Gln Leu Gln Leu
975 500                               505                               510
977 His Gly Asn Asn Thr Tyr Thr Gly Lys Thr Ile Ile Glu Gly Gly Ser
978 515                               520                               525
980 Leu Val Leu Tyr Gly Asn Asn Lys Ser Asp Met Arg Val Glu Thr Lys
981 530                               535                               540
983 Gly Ala Leu Ile Tyr Asn Gly Ala Ala Ser Gly Gly Ser Leu Asn Ser
984 545                               550                               555                               560
986 Asp Gly Ile Val Tyr Leu Ala Asp Thr Asp Arg Ser Gly Ala Asn Glu
987                               565                               570                               575
989 Thr Val His Ile Lys Gly Asp Leu Gln Leu Gly Gly Glu Gly Thr Leu
990 580                               585                               590
992 Tyr Thr Arg Leu Gly Lys Leu Leu Lys Val Asp Gly Thr Ala Met Thr
993 595                               600                               605
995 Gly Gly Lys Leu Tyr Met Ser Ala Arg Gly Lys Gly Ala Gly Tyr Leu

```

RAW SEQUENCE LISTING

DATE: 09/13/2001

PATENT APPLICATION: US/09/830,433

TIME: 17:15:58

Input Set : A:\09-830,433-Seq.Listing.txt

Output Set: N:\CRF3\09132001\I830433.raw

```

996      610      615      620
998 Asn Arg Thr Gly Gln Arg Val Pro Phe Leu Ser Ala Ala Lys Ile Gly
999 625      630      635      640
1001 Arg Asp Tyr Ser Phe Phe Thr Asn Ile Glu Thr Asp Gly Gly Leu Leu
1002      645      650      655
1004 Ala Ser Leu Asp Ser Val Glu Lys Thr Ala Gly Ser Glu Gly Asp Thr
1005      660      665      670
1007 Leu Ser Tyr Tyr Val Arg Arg Gly Asn Ala Ala Arg Thr Ala Ser Ala
1008      675      680      685
1010 Ala Ala His Ser Ala Pro Ala Gly Leu Lys His Ala Val Glu Gln Gly
1011      690      695      700
1013 Gly Ser Asn Leu Glu Asn Leu Met Val Glu Leu Asp Ala Ser Glu Ser
1014 705      710      715      720
1016 Ser Ala Thr Pro Glu Thr Val Glu Thr Ala Ala Ala Asp Arg Thr Asp
1017      725      730      735
1019 Met Pro Gly Ile Arg Pro Tyr Gly Ala Thr Phe Arg Ala Ala Ala Ala
1020      740      745      750
1022 Val Gln His Ala Asn Ala Ala Asp Gly Val Arg Ile Phe Asn Ser Leu
1023      755      760      765
1025 Ala Ala Thr Val Tyr Ala Asp Ser Thr Ala Ala His Ala Asp Met Gln
1026      770      775      780
1028 Gly Arg Arg Leu Lys Ala Val Ser Asp Gly Leu Asp His Asn Ala Thr
1029 785      790      795      800
1031 Gly Leu Arg Val Ile Ala Gln Thr Gln Gln Asp Gly Gly Thr Trp Glu
1032      805      810      815
1034 Gln Gly Gly Val Glu Gly Lys Met Arg Gly Ser Thr Gln Thr Val Gly
1035      820      825      830
1037 Ile Ala Ala Lys Thr Gly Glu Asn Thr Thr Ala Ala Ala Thr Leu Gly
1038      835      840      845
1040 Met Gly His Ser Thr Trp Ser Glu Asn Ser Ala Asn Ala Lys Thr Asp
1041      850      855      860
1043 Ser Ile Ser Leu Phe Ala Gly Ile Arg His Asp Ala Gly Asp Ile Gly
1044 865      870      875      880
1046 Tyr Leu Lys Gly Leu Phe Ser Tyr Gly Arg Tyr Lys Asn Ser Ile Ser
1047      885      890      895
1049 Arg Ser Thr Gly Ala Asp Glu His Ala Glu Gly Ser Val Asn Gly Thr
1050      900      905      910
1052 Leu Met Gln Leu Gly Ala Leu Gly Val Asn Val Pro Phe Ala Ala
1053      915      920      925
1055 Thr Gly Asp Leu Thr Val Glu Gly Gly Leu Arg Tyr Asp Leu Leu Lys
1056      930      935      940
1058 Gln Asp Ala Phe Ala Glu Lys Gly Ser Ala Leu Gly Trp Ser Gly Asn
1059 945      950      955      960
1061 Ser Leu Thr Glu Gly Thr Leu Val Gly Leu Ala Gly Leu Lys Leu Ser
1062      965      970      975
1064 Gln Pro Leu Ser Asp Lys Ala Val Leu Phe Ala Thr Ala Gly Val Glu
1065      980      985      990
1067 Arg Asp Leu Asn Gly Arg Asp Tyr Thr Val Thr Gly Gly Phe Thr Gly
1068      995      1000      1005

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/830,433

DATE: 09/13/2001

TIME: 17:15:58

Input Set : A:\09-830,433-Seq.Listing.txt

Output Set: N:\CRF3\09132001\I830433.raw

1070 Ala Thr Ala Ala Thr Gly Lys Thr Gly Ala Arg Asn Met Pro His Thr
 1071 1010 1015 1020
 1073 Arg Leu Val Ala Gly Leu Gly Ala Asp Val Glu Phe Gly Asn Gly Trp
 E--> 1074 025 / 025 1030 1035 1040
 1076 Asn Gly Leu Ala Arg Tyr Ser Tyr Ala Gly Ser Lys Gln Tyr Gly Asn
 1077 1045 1050 1055
 1079 His Ser Gly Arg Val Gly Val Gly Tyr Arg Phe
 1080 1060 1065

When
 numbering
 first amino
 acid on a line,
 begin number
 directly under
 first letter of
 amino acid

E.g. Arg
 1025

<210> 115

<211> 32

<212> DNA

<213> Artificial Sequence

see item 11 on Ena Summary
sheet

<400> 115

cgggatccat cgtttcttcaa tctccacaaa cg